

# Synergistic inhibition of methicillin-resistant *Staphylococcus aureus* (MRSA) by *Melaleuca alternifolia* Chell (Tea Tree) and *Eucalyptus globulus* Labill. Essential Oils in association with Oxacillin

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Table S1. Qualitative and semi-quantitative analysis of *Melaleuca alternifolia* Chell and *Eucalyptus globulus* Labill. essential oils. Data are expressed as % relative peak area values  $\pm$  standard deviation (SD).

|                        | <sup>a</sup> Lit.<br>RI | <sup>b</sup> Exp.<br>RI | <i>Melaleuca<br/>alternifolia</i> | <i>Eucalyptus<br/>globulus</i> |
|------------------------|-------------------------|-------------------------|-----------------------------------|--------------------------------|
| $\alpha$ -thujene      | 928                     | 926                     | 0.88 <sup>c</sup>                 | -                              |
| $\alpha$ -pinene       | 936                     | 932                     | 2.56 $\pm$ 0.1                    | 2.33 $\pm$ 0.1                 |
| camphene               | 950                     | 947                     | -                                 | 0.51 <sup>c</sup>              |
| sabinene               | 973                     | 972                     | 0.07 <sup>c</sup>                 | -                              |
| $\beta$ -pinene        | 978                     | 975                     | 0.73 <sup>c</sup>                 | 0.99 <sup>c</sup>              |
| $\beta$ -myrcene       | 989                     | 991                     | 0.80 <sup>c</sup>                 | 0.83 <sup>c</sup>              |
| $\alpha$ -phellandrene | 1004                    | 1004                    | 0.45 <sup>c</sup>                 | 0.23 <sup>c</sup>              |
| $\alpha$ -terpinene    | 1017                    | 1017                    | 8.89 $\pm$ 0.2                    | 0.09 <sup>c</sup>              |
| p-cymene               | 1024                    | 1024                    | 2.84 $\pm$ 0.1                    | -                              |
| limonene               | 1029                    | 1028                    | 1.88 $\pm$ 0.1                    | 0.93 <sup>c</sup>              |
| 1,8-cineole            | 1032                    | 1030                    | 2.35 $\pm$ 0.1                    | 58.07 $\pm$ 0.2                |
| cis- $\beta$ -ocimene  | 1038                    | 1039                    | -                                 | 0.21 <sup>c</sup>              |
| $\gamma$ -terpinene    | 1060                    | 1059                    | 20.16 $\pm$ 0.2                   | 1.11 <sup>c</sup>              |
| linalool               | 1099                    | 1100                    | 0.49 <sup>c</sup>                 | 12.05 $\pm$ 0.2                |
| camphor                | 1143                    | 1146                    | -                                 | 4.39 $\pm$ 0.1                 |
| borneol                | 1166                    | 1167                    | -                                 | 1.00 <sup>c</sup>              |
| terpinen-4-ol          | 1177                    | 1179                    | 43.29 $\pm$ 0.2                   | 0.66 <sup>c</sup>              |
| $\alpha$ -terpineol    | 1190                    | 1192                    | 2.99 $\pm$ 0.1                    | 0.71 <sup>c</sup>              |
| linalyl acetate        | 1263                    | 1264                    | -                                 | 10.95 $\pm$ 0.2                |
| $\alpha$ -cubebene     | 1351                    | 1353                    | 0.06 <sup>c</sup>                 | -                              |
| $\alpha$ -copaene      | 1376                    | 1379                    | 0.10 <sup>c</sup>                 | -                              |
| $\alpha$ -gurjunene    | 1409                    | 1414                    | 0.32 <sup>c</sup>                 | -                              |
| $\beta$ -caryophyllene | 1420                    | 1426                    | 0.32 <sup>c</sup>                 | 0.98 <sup>c</sup>              |
| aromadendrene          | 1440                    | 1445                    | 1.07 <sup>c</sup>                 | -                              |
| $\alpha$ -humulene     | 1453                    | 1460                    | 0.09 <sup>c</sup>                 | 0.22 <sup>c</sup>              |
| allo-                  | 1460                    | 1467                    | 0.47 <sup>c</sup>                 | -                              |

|                         |      |      |                   |                   |
|-------------------------|------|------|-------------------|-------------------|
| aromadendrene           |      |      |                   |                   |
| germacrene D            | 1481 | 1488 | -                 | 0.11 <sup>c</sup> |
| $\alpha$ -selinene      | 1493 | 1496 | 0.14 <sup>c</sup> | -                 |
| ledene                  | 1495 | 1501 | 1.31 <sup>c</sup> | -                 |
| $\delta$ -cadinene      | 1523 | 1530 | 1.03 <sup>c</sup> | -                 |
| globulol                | 1582 | 1586 | 0.06 <sup>c</sup> | -                 |
| caryophyllene oxide     | 1589 | 1593 | 0.19 <sup>c</sup> | 0.06 <sup>c</sup> |
| viridiflorol            | 1591 | 1601 | 0.17 <sup>c</sup> | -                 |
| <b>Total identified</b> |      |      | 97.07             | 96.55             |

<sup>a</sup> Literature retention indices (HP-5 MS column); <sup>b</sup> Experimental retention indices (HP-5 ms column); <sup>c</sup> SD < 0.05.

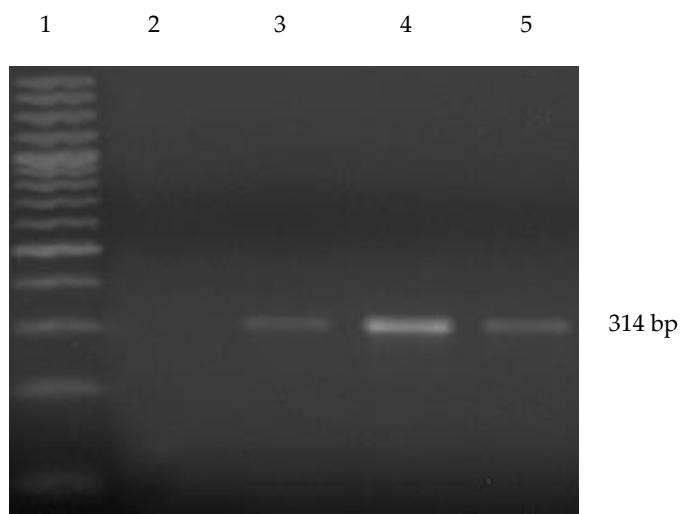


Figure S1: Polymerase chain reaction (PCR) amplification of *mecA* gene. Lane 1: 100 bp DNA ladder, lane 2: *Staphylococcus aureus* ATCC 6538 (negative control), lane 3: *Staphylococcus aureus* 13, lane 4: *Staphylococcus aureus* 20, lane 5: *Staphylococcus aureus* 32.